

tion in the sheep drinking trough water. Both animals were actually handled and closely examined by three persons, all having had more than adequate experience with the large Macropodidae to enable positive identification. Those concerned were R. Prince, Department of Zoology, University of Western Australia; J. Long, Agriculture Protection Board, and myself. Both animals were released in a nearly recovered state shortly after examination.

It is perhaps relevant to note that exceptionally heavy and well-distributed rain had fallen over the pastoral areas during the preceding winter and summer months.

—A. J. OLIVER, Department of Agriculture, Wiluna.

Leaf Carrying by *Neophema splendida*.—For the past three years my wife and I have observed our female aviary-bred Scarlet-chested Parrots (*Neophema splendida*) biting green leaves off various growing shrubs, i.e., Climbing Honeysuckle, Cotoneaster, Mandarin, Tree Lucerne, Hibiscus, Cumquat and Eucalypts. Small leaves only are chosen. Each leaf is nipped off and twirled around with a circular motion in the bill either to render it pliable or to position it appropriately. The leaf is then tucked under the rump feathers. Many leaves fall to the ground, but when several leaves are aboard the bird flies to the nesting site and deposits its burden therein. This behaviour is only evident when eggs are in the nest. Inspection of nesting logs or boxes reveals only a few leaves, so presumably the green matter is to supply humidity and is not for nest building.

Most aviculturists keep these lovely parrots, incorrectly I think, in aviaries devoid of growing shrubs. Therefore, observation of this behaviour is apparently limited. However, R. Graham of Rivervale informs me he has observed a female in his aviary pick, and carry at the one time in a similar manner, seventeen green Victorian Tea Tree leaves. The behaviour resembles that of the African parrot genus *Agapornis*.

—A. Y. PEPPER, Scarborough.

The Shortbill Spearfish, *Tetrapturus angustirostris*, from Western Australia.—On August 27, 1965, Mr. C. H. Johnston observed a fish in difficulties in shallow water inside the reef at North Cottesloe. He managed to capture the fish by hand, and then notified the press of his find. A photograph was published in *The West Australian* on August 28, 1965. The W.A. Museum was notified of the capture, and the specimen was donated for further study. Unfortunately, the head and first anal fin had been removed, one side skinned, and the fish completely gutted.

The fish was an immature male shortbill spearfish, *Tetrapturus angustirostris* Tanaka, the first record for Australian waters, and second record of the species for the Indian Ocean. To my knowledge this is the first specimen to be taken in shallow coastal waters in any part of the world. Jones and Silas (1962: 73) give the distribution of this species as: Japan south of 35°N. latitude; Formosa;

Philippines; Eastern Indian Ocean (lone record from Lat 25° 13' S., Long. 99° 83' E.); eastwards, Baja California and Chile.

Mr. Johnston described the colour of the fish as "a beautiful blue colour, and silvery white below". The fins are without markings and the body shows no evidence of stripes or other markings. The under surface of the head and belly was silvery to white. Pelvic fins were a bright royal blue when fresh, but rapidly became a blue-black colour.

Meristic data: Dorsal, XLIX; 6. Anal, 11, 8 + (damaged); 7. Pectoral, 17. Pelvic, 1. This agrees well with the counts given for this species by Jones and Silas (*ibid.*: 73).

Measurements in millimetres (measured between perpendiculars from given points): Snout tip to: caudal fork, 1,140; upper tail notch, 1,072; second dorsal fin origin, 938; second anal fin origin, 920; first anal fin origin, 710 approximately; vent, 620 approximately; posterior margin of opercle, 287; posterior margin of preopercle, 235; first dorsal fin origin, 240; posterior margin of maxillary, 187; anterior margin of orbit, 156; anterior margin of nostril, 140; tip of mandible, 42.

Diameter of orbit, 32; interorbital space (bony interorbital), 44; width of bill opposite tip of mandible, 11.5; depth of bill opposite tip of mandible, 8; least depth of caudal peduncle, 33; least width of caudal peduncle, 22.

Length of: upper caudal keel, 32; lower caudal keel, 31; second dorsal fin first ray, 33; second dorsal fin last ray, 45; second dorsal fin base, 50; first anal fin first ray, 74; second anal fin first ray, 30; second anal fin last ray, 42; second anal fin base, 48; pectoral fin, 104; pelvic fin, 258.

These measurements were compared, where possible, with the morphometric measurements given by Royce (1957: 541, 548) and three dimensions were found to be outside the range of Royce's specimens. These were: snout tip to anterior margin of orbit 13.7% of fork length instead of 14.2-14.3% (two specimens); length of pectoral fin 9.1% of fork length instead of 11.3-13.3% (eight specimens); length of pelvic fin 22.6% of fork length instead of 20.3-21.9% (four specimens).

The small size of the Western Australian example (1,140 mm.) may explain the differences in proportions described above, as Royce's Pacific specimens ranged from 1,470 mm. to 1,857 mm. in length to the caudal fork.

The specimen is registered P.13909 in the Western Australian Museum.

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